

### Amendments to the Claims

Please cancel Claims 10-14 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1 and 3-9, and add new Claims 15-18 to read as follows.

1. (Currently amended) A printing apparatus which performs printing by scanning a carriage unit, capable of holding a printhead, ~~having a printhead and a voltage control unit controlling the printhead~~, over a print medium based on information transmitted by an external apparatus, ~~said a~~ a voltage control unit for controlling the printhead comprising:

reception means for receiving an information signal transmitted from the printhead; and

voltage generation means for generating a ~~driving~~ voltage which is adjusted to drive the printhead based on the information signal received by said reception means, wherein said voltage control unit is provided on the carriage unit.

2. (Original) The printing apparatus according to claim 1, wherein said voltage generation means is a DC/DC converter which transforms a DC voltage to be applied to the printhead into a value appropriate for driving a mounted head.

3. (Currently amended) The printing apparatus according to claim 1, wherein the information signal includes an identification signal for identifying a type of the printhead, and said voltage generation means controls the ~~driving~~ voltage in accordance with the identification signal.

4. (Currently amended) The printing apparatus according to claim 1, wherein the information signal includes a signal indicative of a variation of a plurality of heater resistances provided in the printhead, and said voltage generation means controls the ~~driving~~ voltage in accordance with ~~said~~ the signal.

5. (Currently amended) The printing apparatus according to claim 1, wherein the information signal includes a signal indicative of temperature data of the printhead, and said voltage generation means controls the ~~driving~~ voltage in accordance with ~~said~~ the signal.

6. (Currently amended) The printing apparatus according to claim 1, wherein a detection resistance is provided inside the printhead for detecting a ~~variation of~~ the value reflecting heater resistances for printing, and said voltage generation means comprises an internal resistance connected in series with the detection resistance,

wherein said voltage generation means compares a reference voltage, divided by the internal resistance and the detection resistance, with a driving voltage which drives the printhead, then controls the driving voltage so as to cancel an error in these

voltages, and adjusts the driving voltage in accordance with a variation of a load resistance value of the printhead so as to correct the variation.

7. (Currently amended) The printing apparatus according to claim 1, wherein the printhead includes a diode for detecting a temperature, and said voltage generation means comprises an internal resistance connected in series with the diode, wherein said voltage generation means compares a reference voltage, divided by the internal resistance, detection resistance provided inside the printhead, and the diode, with a driving voltage which drives the printhead, then corrects an error in these voltages, and generates a control voltage for optimizing power supplied to heat the printhead, so as to discharge ink in accordance with a temperature variation of the printhead.

8. (Currently amended) The printing apparatus according to claim 1, further comprising:

a plurality of heat sources for generating bubble generation heat for driving in nozzle ~~unit~~ units;

driving pulse generation means for generating a pulse train which drives the plurality of heat sources; and

heat source number detection means for detecting a number of the plurality of heat sources driven simultaneously,

wherein said voltage generation means adjusts a voltage outputted to the heat sources based on a signal from said heat source number detection means.

9. (Currently amended) The printing apparatus according to claim 1, wherein said heat source number detection means detects the number of the plurality of heat sources driven simultaneously based on an image data signal.

Claims 10-14 (cancelled)

15. (New) The printing apparatus according to claim 1, wherein the printhead has printing elements for performing a printing processing, and  
said voltage generation means generates the voltage according to a number of the printing elements to be driven.

16. (New) The printing apparatus according to claim 15, wherein said voltage generation means receives the information signal according to the number of the printing elements to be driven, and generates the voltage based on the received information signal.

17. (New) The printing apparatus according to claim 15, wherein the number of the printing elements to be driven is the number of printing elements driven simultaneously.

18. (New) The printing apparatus according to claim 1, wherein printing is effected by ejecting ink from the printhead.